

In the Claims:

1. (Currently amended) Display device comprising:
a liquid crystal material between a first substrate provided with row electrodes
and a second substrate provided with column electrodes,
row driving circuitry for driving selected row electrodes during a plurality of row
selection times wherein, for each row selection time, at least one row electrode is
selected,
column driving circuitry for driving the column electrodes according to a column
waveform that includes at least two different voltage levels and that is in conformity with
a grayscale for the at least one row electrode that is selected and an image to be
displayed, and
processor circuitry for assessing a number of voltage transitions saved by
mirroring of a particular column waveform for a row selection time, for assessing a
number of voltage transitions produced by mirroring of the particular column waveform
and for mirroring the particular column voltage waveform in response to the number of
transitions saved exceeding the number of voltage transitions produced.
~~driving circuitry for driving the row electrodes, wherein during a row selection
time at least one row is selected and column voltages are supplied to the column
electrodes,~~
~~wherein the column voltage waveform depends on a grey scale to be displayed by
a driven pixel in a certain column and depends on a used selection signal supplied to the
selected row,~~
~~wherein a column voltage is switchable between at least two different column
voltage levels during the row selection time and the column voltage waveform for a
following row selection time is mirrored on a mirror axis depending on the column
voltage at the end of the current row selection time and the column voltage at the end of
the following row selection time.~~
2. (Original) Display device as claimed in claim 1, wherein the mirroring is
performed if the column voltage at the end of the current row selection time is the same
as the column voltage at the end of the following row selection time.

3. (Previously presented) Display device as claimed in claim 1, wherein groups of p rows are driven simultaneously and the row electrodes supply groups of p rows with mutually orthogonal selection signals for driving pixels, in which pixels are defined by overlapping parts of the row and column electrodes, wherein the column voltage is calculated depending on the grey scales to be displayed by the p concurrently driven pixels in a certain column and depending on the used mutually orthogonal selection signals for the respective group of p rows.
4. (Currently amended) Display device as claimed in claim 1, wherein the row selection time is subdivided into n_{pwm} sub slots and wherein processor circuitry is further for
assessing, for each sub slot, voltage transitions produced by mirroring a portion of the particular column waveform corresponding to the sub slot,
assessing, for each sub slot, voltage transition produced by mirroring the portion of the particular column waveform corresponding to the sub slot, and
determining whether or not to mirror, for each sub slot, the portion of the particular column waveform in response to the number of transitions saved exceeding the number of voltage transitions produced. mirroring is done adaptively depending on the picture to be displayed.
5. (Original) Display device as claimed in claim 1, wherein the mirror axis is defined in the middle of a row selection time.
6. (Original) Display device as claimed in claim 1, wherein the mirror axis is defined adaptively.
7. (Original) Display device as claimed in claim 2, wherein the row selection time is subdivided into n_{pwm} sub slots and the column voltage signal can have $p+1$ different voltage levels during a row selection time.
8. (Original) Display device as claimed in claim 1, wherein the following column

voltage level for the subsequent row selection time is calculated during the current row selection time.

9. (Currently Amended) Circuit arrangement for driving a display device having row electrodes and column electrodes, the circuit arrangement comprising:

driving means for driving the column electrodes in conformity with an image to be displayed on the display, [and]

driving means for driving the row electrodes, at least one row electrode being selected during a row selection time and column voltages are supplied to the column electrodes, and

processing circuitry for wherein

providing the column voltage waveform dependent [s] on a grey scale to be displayed by a driven pixel in a certain column and dependent [s] on a used selection signal supplied to the selected row, [a] the column voltage is switcheable between at including at least two different column voltage levels during the row selection time, and

determining how many transitions will be produced and saved by mirroring the column voltage waveform for a following row selection time is mirrored on a mirror axis, the determination based upon a function of depending on the column voltage at the end of the current row selection time, and the column voltage at the beginning of the following row selection time, the column voltage at the end of the following row selection time and the column voltage at the beginning of a row selection time after the following row selection time.

10. (Currently amended) Method for driving a display device having row electrodes and column electrodes, the method comprising:

during a row selection time, selecting at least one row and supplying column voltages to the column electrodes, wherein the column voltage waveform depends on a grey scale to be displayed by a driven pixel in a certain column and depends on a used selection signal supplied to the selected row, the column voltage having at least two different column voltage levels during the row selection time, and

mirroring the column voltage waveform for a following row selection time is ~~mirrored~~ on a mirror axis, the mirroring dependent [ing] on a comparison of the total number of transitions before mirroring and the total number of transitions after mirroring as determined from the column voltage at the end of the current row selection time and the column voltage at the end of the following row selection time.

11. (Currently amended) A display device comprising:

a liquid crystal material between a first substrate provided with row electrodes and a second substrate provided with column electrodes;

a driver circuit arrangement, including a row driver circuit and a column driver circuit, configured to drive the row electrodes and to drive the column electrodes in conformity with an image to be displayed, by

during an initial row selection time, selecting at least one row and applying column voltages to the column electrodes using a voltage waveform for each column that is based upon a grey scale to be displayed by a driven pixel in the column and upon a selection signal supplied to the selected row, the column voltage being switchable between at least two different column voltage levels during the row selection time, and

during a following row selection time immediately after the initial selection time, selectively applying column voltages to each of the column electrodes using the voltage waveform applied to the column during the initial row selection time as mirrored on a mirror axis, based upon a determination of how many transitions will be produced and saved, the determination based upon the column voltage at the end of said row selection time and the column voltage at the end of the following row selection time.

12. (Previously presented) The display device of claim 11, wherein the driver circuit arrangement is configured to selectively apply column voltages to the column electrodes during the following row selection time by applying a mirrored version of the voltage waveform applied to the column electrodes during the initial row selection time, in response to the column voltage at the end of the initial row selection time being the same voltage as the column voltage at the end of the following row selection time.

13. (Previously presented) The display device of claim 11, wherein the driver circuit arrangement is configured to drive groups of p rows simultaneously,
- the row electrodes supply the groups of p rows with mutually orthogonal selection signals for driving pixels, in which pixels are defined by overlapping parts of the row and column electrodes, and
- the driver circuit arrangement calculates the column voltage based upon the grey scales to be displayed by the p concurrently driven pixels in a certain column, and
- the mutually orthogonal selection signals for the respective group of p rows.
14. (Previously presented) The display device of claim 11, wherein the driver circuit arrangement selectively applies the mirrored voltage waveform based upon a characteristic of the picture to be displayed.
15. (Previously presented) The display device of claim 11, wherein the driver circuit arrangement selectively applies the mirrored voltage waveform when the application of the mirrored voltage waveform eliminates a column voltage transition between the initial and following row selection times.
16. (Previously presented) The display device of claim 11, wherein the driver circuit arrangement only applies the mirrored voltage waveform when the application of the mirrored voltage waveform eliminates a column voltage transition between the initial and following row selection times.
17. (Previously presented) The display device of claim 11, wherein the driver circuit arrangement is configured, for time window having at least three row sub selection time slots, to selectively apply a mirrored voltage waveform in response to a voltage level of the third row sub selection time slot being the same as the voltage level as the first row sub selection time slot.

18. (Previously presented) The display device of claim 11, wherein the driver circuit arrangement is configured, for time window having at least three row sub selection time slots, to selectively apply a mirrored voltage waveform in response to a voltage level of the third row sub selection time slot being the same as the voltage level as the first row sub selection time slot, by exchanging the voltage waveform in the second row sub selection time slot with the voltage in the third row sub selection time slot to mitigate voltage transitions between the time slots.